To: Michael Gracz [mike@kenaiwatershed.org]
Cc: []
Bcc: []
From: CN=Phil North/OU=R10/O=USEPA/C=US
Sent: Fri 11/30/2012 10:39:21 PM
Subject: Re: GW recharge area map work for assessment
mike@kenaiwatershed.org
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mike@kenaiwatershed.org
ckikuchi@usgs.gov
http://pubs.er.usgs.gov/publication/sir20065318

MIke and Colin,
To be clear - I have not talked with anyone at Moore about research. I was speaking based on knowledge that they are interested in salmon issues and interested in Bristol Bay. Someone would have to talk with them to see if there is interest in research.

The Mat-Su hydrology work sound cool.

Phil

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"To protect your rivers, protect your mountains."

From: Michael Gracz <mike@kenaiwatershed.org>
To: Colin Kikuchi <ckikuchi@usgs.gov>
Cc: Phil North/R10/USEPA/US@EPA
Date: 11/30/2012 01:12 PM
Subject: Re: GW recharge area map work for assessment

Hi Colin-

I think we should wait until after the 11th when I get a chance to talk with Matt and Bill. I have a little money, but not enough and I'm not sure how flexible they can be. After talking with you at the symposium I was guessing you could do it for around 40 hours, and that it wouldn't cost too much more than $2k. I thought maybe since the model was pretty well parameterized, you would just need to run it again over an

expanded area using similar values to the ones in the "Core Area" as we call it. There would probably not be any new veg or soil types and I have the climate data for Willow, Talkeetna, and Skwentna (and the PRISM precip. data, which may be more useful). I'll get you a boundary shapefile when I get my other machine booted- soon.

This is tough- we really only need a coarse-scale product for now, but eventually it would be nice to incorporate as much as we could about peatland processes, which may be outside the scope of small tweaks to DPM?

I don't want you to spend to much time on it until we know we can get you some dough.

On another track, if you are looking for projects, the Moore foundation might be interested in funding this sort of work for the Bristol Bay Region in order to better understand the role of GW-SW interactions with salmon streams and the proposed Pebble Mine. Phil North of the EPA, cc'd, mentioned this to me today on the phone. They might be up for a more detailed model as well.

Mike

Phil- As part of his MS, Colin did a nice, coarse-scale map showing relative GW recharge and discharge areas by 12-th order HUC in the Valley. The DPM model used to create the map uses parameters like average veg type and soil series over the area to get values for run-off, interception, and ET which are used to calculate recharge amounts for each HUC. There were something like 40 polygons in an area of about 350,000 acres. Coarse scale- but interesting differences.

He's a great, smart, and enthusiastic hydrologist that can communicate!

Mike

On Nov 30, 2012, at 12:26 PM, Colin Kikuchi wrote:

Hi Mike,

Thanks for your feedback. I'll have a careful look through those papers. Also, I think it would be helpful for me to get a better idea of the application for the recharge modeling, and then I could revise accordingly. Could set up a time to talk sometime in the next two weeks? Next Friday (Dec. 7) would work well for me - are you available then? If not, we could also try for some time on Thursday. Let me know what you think!

-Colin

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-----Michael Gracz <mike@kenaiwatershed.org> wrote: -----

To: Colin Kikuchi <ckikuchi@usgs.gov>
From: Michael Gracz <mike@kenaiwatershed.org>
Date: 11/27/2012 05:21PM
cc: Bill Rice <William_Rice@fws.gov>, Matthew LaCroix <LaCroix.Matthew@epamail.epa.gov>
Subject: Re: GW recharge area map work for assessment

Thanks Colin,

I'll be talking with my colleagues about this in two weeks. I do have some concerns about how DPM can be modified to handle net recharge/discharge in bog mounds over fen peat- there is a lot of this in some parts of the mapping area. Check out the attached papers.

Mike

On Nov 27, 2012, at 1:55 PM, Colin Kikuchi wrote:

Hi Mike,

I've put together a one-page description with proposed work on groundwater recharge modeling in conjunction with your wetlands mapping work. Please let me know if there is any additional information I can provide. Thanks!

-Colin

Colin Kikuchi
Student Trainee
Arizona Water Science Center
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Tucson, AZ 85719
(520)-670-6671 ext. 390

From: "Mike Gracz" <mike@kenaiwatershed.org>
To: "'Colin Kikuchi'" <ckikuchi@usgs.gov>
Cc: <LaCroix.Matthew@epamail.epa.gov>, "Bill Rice" <William_Rice@fws.gov>
Date: 11/14/2012 02:45 PM
Subject: GW recharge area map work for assessment

Matt and Bill and I will meet 11 December and I'll see if they can cut loose some dough. Can you provide me with a one-page description including a cost estimate?

Yeah, the data would be useful- I have some from the first year, but not all of it, and no isotope data

Mike

From: Colin Kikuchi [mailto:ckikuchi@usgs.gov]
Sent: Wednesday, November 14, 2012 9:44 AM
To: Michael Gracz
Subject: Re: Salmon symposium

Hey Mike,

I just got off the phone with Steve, and he said it would be fine for me to work on extending DPM over the areal extent for your wetlands mapping, if we can put together an agreement. Let me know what you think!

Also, I can't remember if we discussed this at the conference, but the piezometers are still out in the Big Lake area that were used in the study commissioned by EPA. I don't think that we are operating them anymore. Would data from those piezometers be useful for your study?

-Colin

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From: Michael Gracz <mike@kenaiwatershed.org>
To: Colin Kikuchi <ckikuchi@usgs.gov>
Date: 11/09/2012 08:01 AM
Subject: Re: Salmon symposium

Hi Colin,

Likewise, I enjoyed meeting you too. I wish you could work more up here. The funding is uncertain, but I think we can dredge up something. I'll talk with Steve too, and then with Bill Rice and Matt laCroix to see how much money we might be able to come up with.

I'll get you the shapefile of the boundary by monday- my GIS computer is fading, a new one has arrived, but it will take a little time to get up and running again...

Mike

On Nov 8, 2012, at 6:48 PM, Colin Kikuchi wrote:

Hey Mike,

It was really great to meet you, finally! I really enjoyed chatting, too!

I'm going to follow up with my supervisor, Steve, to see if it would be ok for me to spend some time extending the recharge modeling (in DPM) in your study area in the Susitna Valley. Just so I know, you said there was some funding available to cover this work?

Also, here is a link (http://pubs.er.usgs.gov/publication/sir20065318) to the report documenting the Deep Percolation Model, if you have some time to look it over. Let me know what you think!!!

-Colin

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[attachment "SiegelGlaser2000JHydrologyVerticalFlow.pdf" removed by Colin Kikuchi/WRD/CONT/USGS/DOI]
[attachment "WetlandsDPM_ProposedWork.pdf" removed by Colin Kikuchi/WRD/CONT/USGS/DOI]